

Remarks

The various parts of the Office Action (and other matters, if any) are discussed below under appropriate headings.

Drawings

The drawings were objected to for not being of sufficient quality for publication. A substitute formal drawing sheet is enclosed herewith. Accordingly, the objection to the drawings should be withdrawn.

Claim Objections

Claims 12 and 13 were objected to for lack of antecedent basis. The claims have been corrected. Accordingly, the objection should be withdrawn.

Claim Rejections - 35 USC § 112

Claim 11 was rejected as being indefinite for using of the phrase, "for example" (e.g.). The claim has been amended for clarity. Therefore, the rejection should be withdrawn.

Claim Rejections - 35 USC § 102 and § 103

Claim 1, as amended, recites a method of detecting the shape of a patient body part to be treated, which includes, *inter alia*, applying at least one navigation system detectable marker to the patient body part, mapping a sufficient number of outlines of the patient body part to establish a three-dimensional shape, assigning a location and shape of the patient body part in the navigation system via a position of the at least one marker captured by the camera, and processing the mapped shape of the patient body part by the navigation system to incorporate the outer shape of the patient body part in navigation.

Nakagawa, taken alone or in combination with any of the cited references, fails to disclose or fairly suggest the claimed invention. As noted by the Examiner, Nakagawa includes no mention of detecting or mapping the shape of a patient body part, let alone use of a navigation system. While the Examiner relies on Cabib to supplement the teaching of Nakagawa, it is respectfully submitted that this rejection is improper because (1) there is no motivation to combine Nakagawa and Cabib and (2) even assuming *arguendo* that this unmotivated combination is proper, the cited

references, taken alone or in combination, fail to disclose or fairly suggest the claimed invention.

It is noted that the Examiner carries the burden of establishing a prima facie case of obviousness. MPEP 2142. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). See also, *In re Dembiczak*, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

First, there is no motivation to combine Nakagawa and Cabib. On page 8 of the office action, the Examiner contends that "Nakagawa and Cabib are both concerned with image processing methods." Cabib describes a method for spectral imaging of a moving object. The field of spectral imaging is a field far away from the shape detection as recited by the claimed invention and, as such, should be deemed non-analogous art pursuant to MPEP 2141.01(a).

Moreover, spectral imaging as described by Cabib has no connection with the solid shape detection of Nakagawa except that both may be summarized under the very broad term of "image processing." However, "image processing" is such a broad field with so many completely different applications that this broad term cannot connect the Cabib and Nakagawa references in the way explained by the Examiner. For example, the development of photos would also be "image processing," but has nothing to do with the technology used according to the present invention or the technology described by Nakagawa.

It is noted that the skilled person dealing with the technical field of Nakagawa would not be the same skilled person or would not have skills in the same field as a person dealing with medical navigation (as recited in the claimed invention) or spectral imaging (as discussed in Cabib). In the field of assigning structures in a navigation system, up to the point of the present invention, as claimed, merely information from slice images (CT, MRI) has been used to determine the outer form of a patient body part.

Further, none of the cited references, taken alone or in combination disclose or fairly suggest anything having to do with a navigation system, let alone the steps

involving assigning mapped shape information to a navigation system, as recited in claim 1. The Examiner regards the camera which might be used according to Cabib, column 15, lines 49 to 65, as a "navigation system". However, it is respectfully submitted that a skilled person would not confuse such a simple video camera with a navigation system used to assign the location of an object. In fact, a "navigation system" is well known term in the field of the claimed invention, and this term incorporates much more than just a video camera for real time display of some tissue. See, for example, U.S. Patent No. 6,351,659.

With regard to the Examiner's characterization of the "Admission" on page 1 of the application, it is noted that page 1 of the application notes that markers have been used in connection with tomography applications to provide positional data used with a surgical navigation system. This disclosure is in no way suggestive of the claimed invention.

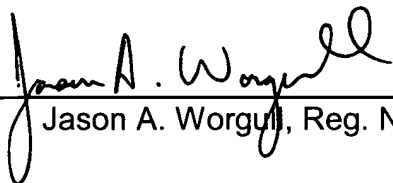
For at least these reasons, it is respectfully submitted that claim 1 and claims 2-6 and 9-13 dependent therefrom distinguish patentably over the references of record. Accordingly, the rejection should be withdrawn.

Conclusion

In view of the foregoing, request is made for timely issuance of a notice of allowance.

Respectfully submitted,

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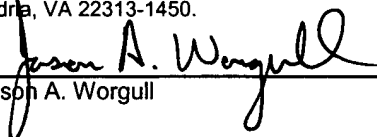
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